

REMARKS/ARGUMENTS

Reconsideration of the subject application is requested. Several changes of an editorial nature have been made to the specification. Claims 1, 3-9, 11-16, 18 and 19 remain in the application. Claim 19 has been editorially amended.

In the Detailed Action portion of the Office Action, claims 1, 3-7, 16 and 18 have been rejected under 35 U.S.C. 102(e), as being anticipated by Raese (U.S. Patent No. 6,700,853).

Raese was cited as disclosing the invention as claimed. In particular, Figs. 1-11 of Raese were cited as showing a data storage device (100) having a closed interior space (104) containing a noble gas; the plurality of electron emitters (108) having emission surfaces exposed within the interior space, the electron emitters adapted to emit electron beams; and a storage medium (110) contained within the interior space in proximity to the electron emitters, the storage medium having a plurality of storage areas that are capable of at least two distinct states that represent data, the state of the storage areas being changeable in response to bombardment by electron beams emitted by the electron emitters.

Raese was further cited as teaching that the interior space is maintained in a vacuum of at least 10^{-3} Torr (see column 3, lines 5-7), and that the electron emitter comprises field or flat emitters or various other types of emitters (see for example column 3, lines 12-18).

This rejection is traversed. With respect to claim 1, the Applicant respectfully submits that the Applicant's invention as set forth in claim 1 includes an element that is neither disclosed nor suggested in Raese. In particular, claim 1 includes an interior space containing a noble gas. While the Office Action states that Raese discloses a data storage device (100) having a "closed interior space (104) containing a noble gas," the Applicant respectfully submits that Raese does not disclose or suggest the use of a closed interior space (104) containing a noble gas in a data storage device. Raese does not disclose or suggest the use of a noble gas in a data storage device, and in fact, Raese never mentions a noble gas at all. In addition, Raese does not discuss the problem

of contaminant removal and therefore does not address the problem solved by the Applicant's invention.

The Applicant's invention provides a data storage device that employs a mechanism to remove contaminants from the emission surfaces of the electron emitters contained within the device. In claim 1, that mechanism is provided by the noble gas in the closed interior space. The use of a noble gas to remove contaminants is discussed in the specification at page 12, line 21 through page 13, line 13. Raese does not disclose the use of a noble gas in a data storage device, and does not address the problem solved by the Applicant's invention.

Claims 3-7 depend from claim 1, and therefore also include an interior space containing a noble gas.

With respect to claim 16, the Applicant respectfully submits that the Applicant's invention as set forth in claim 16 includes a step that is neither disclosed nor suggested in Raese. In particular, claim 16 includes the step of providing a noble gas within an interior space. While the Office Action states that Raese discloses a data storage device (100) having a "closed interior space (104) containing a noble gas," the Applicant respectfully submits that Raese does not disclose or suggest the use of a data storage device having a closed interior space (104) containing a noble gas. Raese does not disclose or suggest the use of a noble gas in a data storage device, and in fact, never mentions a noble gas at all. In addition, Raese does not discuss the problem of contaminant removal and therefore does not address the problem solved by the Applicant's invention. Thus Raese does not disclose or suggest the step of providing a noble gas within an interior space. Claim 18 depends from claim 16 and therefore also includes the step of providing a noble gas within an interior space.

In the Detailed Action portion of the Office Action, claims 1, 3-9, 11-16, 18 and 19 have been rejected under the judicially created doctrine of nonstatutory double patenting over claims 1-6, 8-13, 15, 16 and 23 of Naberhuis (U.S. Patent No. 6,738,336). U.S. Patent No. 6,738,336 and the present application are commonly owned. This rejection is traversed through the enclosed Terminal Disclaimer.

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In view of the above remarks, all claims are believed to be allowable.
Allowance of the application is requested.

Respectfully submitted,

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